DEPARTMENT OF THE NAVY
HELICOPTER TRAINING SQUADRON EIGHTEEN
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MILTON, FL 32570-6011

IN REPLY REFER TO
HT-18INST 4790.2
MAR 25 2009

HELTRARON EIGHTEEN INSTRUCTION 4790.2

Subj: INTRODUCTION TO THE AIRCRAFT DISCREPANCY BOOK (ADB)

Ref: (a) COMNAVAIRFORINST 4790.2A

1. Purpose. To provide an introduction and reference to the Aircraft Discrepancy Book (ADB) per reference (a).

2. Scope. This instruction details items and procedures regarding the ADB that are imperative to the safe, legal and orderly conduct of flight operations per reference (a). This instruction is tailored toward maintenance operations at TRAWING FIVE, and does not encompass all procedures and exceptions you may find in the fleet. Paragraphs preceded with paragraph numbers refer to paragraph location in reference (a).

3. Action. All pilots involved in the flight operations of this squadron shall have a thorough knowledge and comply with this instruction.

4. Review. Review of this instruction shall be completed as necessary based on updates and/or changes to reference (a).

S. J. COAKLEY
By direction

Distribution: (HT-18INST 5216.1H)
List I, Case 1
S:\WHTG\HT-18_NEW\Squadron Documents\Instructions

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CHAPTER I

DEFINITIONS

ACC – Aircraft Controlling Custodian – A term applies to air commands and COMNAVAIRSYSCOM for exercising administrative control of assignment, employment, and logistic support of certain aircraft and aircraft engines as specified by the CNO. The following ACC's have been designated by CNO: COMNAVAIRFOR, **CNATRA**, COMNAVRESFOR, and COMNAVAIRSYSCOM.

ADB – Aircraft Discrepancy Book

BUNO – Bureau Number – An unhyphenated serial number, not exceeding six digits, used to identify individual airframes within the naval aircraft inventory. Each number is unique to a particular airframe. Assignment is controlled by the CNO.

CNO – Chief of Naval Operations

Daily Inspection – An inspection conducted to inspect for defects to a greater depth than the turnaround inspection.

JCN – Job Control Number

MDS – Maintenance Data System

MOS – Military Occupational Specialty

Reporting Custodian – An organizational unit of the lowest echelon of command accepting responsibility, involving the accountability to the CNO, for aircraft or engines, as designated either by CNO or by the ACC.

T/M/S – Type/Model/Series

Turnaround Inspection – An inspection conducted between flights to ensure the integrity of the aircraft for flight, verify proper servicing, and to detect degradation that may have occurred during the previous flight.

VIDS/MAF – Visual Information Display System/Maintenance Action Form. A multi-purpose document used in the MDS and the VIDS.

W&B – Weight and Balance

QA – Quality Assurance – A planned and systematic pattern of all the actions necessary to provide adequate confidence that the item or product conforms to established technical requirements.

CHAPTER II

ADB

(15.1.1.2.4) Maintenance Control will maintain an ADB for each aircraft assigned. The ADB is designed to provide maintenance and aircrew personnel with an accurate, comprehensive, and chronological record of flights and maintenance performed on a specific aircraft by BUNO for at least the last 10 flights. All (outstanding discrepancies) shall be displayed in the ADB so the aircrew is fully aware of potential limitations for a safe and successful mission. The ADB shall accurately reflect the status of all pending maintenance requirements as shown on the Maintenance Control and work center VIDS boards. The ADB for each specific BUNO shall be validated for completed and outstanding MAFs before certifying the aircraft **safe-for-flight**.

(15.1.1.3.1) MAINTENANCE CONTROL MUST BE IN CONTROL OF MAINTENANCE to ensure successful operation.

The ADB will include the Aircraft Inspection and Acceptance Sheet (A-Sheet) for the flight to be flown, Daily/Turnaround/Postflight Maintenance Record, engine health data, history of engine or transmission chip lights as applicable, A-Sheets for the previous 10 flights, outstanding MAFs, and any MAFs completed within the previous 10 flights.

CHAPTER III

AIRCRAFT INSPECTION AND ACCEPTANCE RECORD (A-SHEET)

AIRCRAFT INSPECTION AND ACCEPTANCE RECORD — OPNAVINST 4790.2E

1. A/C BU/SER NO.	2. T/M/S	3. RPT. CUST.	4. OXY	5. FUEL GRADE	5. FUEL QTY	6. OIL GRADE	6. OIL 1	6. OIL 2	6. OIL 3	6. OIL 4	7. DATE

8. ORDNANCE / SPECIAL EQUIPMENT / LIMITATIONS / REMARKS:	9. I have personally inspected this aircraft IAW the applicable MRCs/checklists. Any discrepancies noted have been entered on OPNAV 4790/35.
	SIGNATURE OF PLANE CAPTAIN — RANK / RATE
	10. Certification of safe for flight condition by the MO, MMCO, or MCO. Other persons may sign this form if authorized.
	SIGNATURE — RANK / RATE
	11. I have reviewed the discrepancy reports of the 10 previous flights, insured proper filing of weight and balance data, and accept this aircraft for flight.
	SIGNATURE OF PILOT IN COMMAND — RANK

OPNAV 4790/141 (12-89) S/N 0107-LF-006-4600

(FIGURE 3-1)

(5.1.1.2.4) The Aircraft Inspection and Acceptance Record (OPNAV 4790/141) (Figure 3-1) provides for:

a. The pilot's acceptance of the aircraft in its present condition.
b. Identification of aircraft by BUNO, T/M/S, and reporting custodian.
c. Certification of an aircraft's readiness for flight by maintenance personnel, and a record of fuel, oil, oxygen, expendable ordnance aboard, special equipment, and limitations.

(5.1.1.2.5) The record shall be filled out as follows:

Block 1 – A/C BU/SERNO. Enter the BUNO of the aircraft.

Block 2 – T/M/S. Enter the T/M/S of the aircraft.

Block 3 – RPT. CUST. Enter the reporting custodian of the aircraft.

Block 4 – OXY. Indicate total gaseous or liquid oxygen on board. Not applicable to aircraft with an on board oxygen generating system.

Block 5 – FUEL. Indicate grade and quantity of fuel on board.

Block 6 – OIL. Indicate grade and quantity of oil added to each engine on board.
Block 7 – DATE. Indicate date of acceptance by the pilot-in-command.

Block 9 – SIGNATURE OF PLANE CAPTAIN. Signature and rank or rate of the plane captain who inspected the aircraft.

Block 10 – SIGNATURE. Signature and rank or rate of designated personnel certifying safe for flight condition. All personnel signing the record shall be designated in writing by the CO. If the aircraft is away from home and qualified releasing authority is not available, the pilot-in-command shall sign the certification in the **safe for flight** block. **The debarking pilot of a hot seating crew shall sign here**.

Block 11 – SIGNATURE OF PILOT IN COMMAND. Signature and rank of pilot accepting the aircraft.

(5.1.1.2.6) The record shall remain at the place of first takeoff. If the aircraft is away from home the record will be maintained by the transient host activity until safe completion of the flight.

(5.1.1.3.2) Hot Seating. An operational evolution where the pilot/crew of an aircraft is changed while the engine(s) is (are) operating and the aircraft is to be immediately relaunched.

(5.1.1.3.2.1) For hot seat evolutions, a new A-Sheet will be initiated. As a minimum, "Hot Seat" shall be entered in Block 8, and the new pilot-in-command shall review the ADB and sign Block 11. Performance of these actions will signify a physical continuation for flight of an inspected, serviced, and certified aircraft with a change in pilot or crew and adherence to hot seat servicing and inspection minimums. The debarking pilot shall sign Block 10.

SOLOs. For the purpose of dual solos intending to change seats (Pilot In Command) at the OLF, the first Pilot in Command will sign Block 11, then will sign Block 10 on the following A-Sheet. The second Pilot in Command will then sign Block 11 on the second A-Sheet. On the back of both A-Sheets, the observer for that particular part of the flight shall print his/her name.

(Example)

Front of first A-Sheet

AIRCRAFT INSPECTION AND ACCEPTANCE RECORD — OPNAVINST 4790.2E

1. A/C BU/SER NO.	2. T/M/S	3. RPT. CUST	4. OXY	5. FUEL GRADE	5. FUEL QTY	6. OIL GRADE	6. OIL 1	2	3	4	7. DATE

8. ORDNANCE / SPECIAL EQUIPMENT / LIMITATIONS / REMARKS:

9. I have personally inspected this aircraft IAW the applicable MRCs/checklists. Any discrepancies noted have been entered on OPNAV 4790/86.

SIGNATURE OF PLANE CAPTAIN: *Maintainer, Joe* — RANK / RATE: *E-5*

10. Certification of safe for flight condition by the MO, MMCO, or MCO. Other persons may sign this form if authorized.

SIGNATURE: *Maintenance, Control* — RANK / RATE: *MMCO*

11. I have reviewed the discrepancy reports of the 10 previous flights, insured proper filing of weight and balance data, and accept this aircraft for flight.

SIGNATURE OF PILOT IN COMMAND: *Student, First* — RANK: *1stLT*

OPNAV 4790/141 (12-89) S/N 0107-LF-008-4600

Back of first A-Sheet

AIRCRAFT INSPECTION AND ACCEPTANCE RECORD — OPNAVINST 4790.2E

Student, Second HT-18

OPNAV 4790/141 (12-89) — S/N 0107-LF-006-4600

Front of second A-Sheet

AIRCRAFT INSPECTION AND ACCEPTANCE RECORD — OPNAVINST 4790.2E

1. A/C BU/SER NO.	2. T/M/S	3. RPT. CUST	4. OXY	5. FUEL GRADE	5. FUEL QTY	6. OIL GRADE	6. OIL 1	6. OIL 2	6. OIL 3	6. OIL 4	7. DATE

8. ORDNANCE / SPECIAL EQUIPMENT / LIMITATIONS / REMARKS:

9. I have personally inspected this aircraft IAW the applicable MRCs/checklists. Any discrepancies noted have been entered on OPNAV 4790/38.

SIGNATURE OF PLANE CAPTAIN — RANK / RATE

Hot Seat

10. Certification of safe for flight condition by the MO, MMCO, or MCO. Other persons may sign this form if authorized.

SIGNATURE — RANK / RATE

Student, First — *1stLT*

11. I have reviewed the discrepancy reports of the 10 previous flights, insured proper filing of weight and balance data, and accept this aircraft for flight.

SIGNATURE OF PILOT IN COMMAND — RANK

Student, Second — *ENS*

OPNAV 4790/141 (12-89) — S/N 0107-LF-006-4600

Back of second A-Sheet

AIRCRAFT INSPECTION AND ACCEPTANCE RECORD — OPNAVINST 4790.2E

Student, First HT-18

OPNAV 4790/141 (12-89) — S/N 0107-LF-006-4600

(5.1.1.2.1) Two of the most critical aspects in naval aviation are the release of an aircraft safe for flight and the acceptance of the aircraft. Both of these functions carry a great deal of importance and go hand in hand to ensure the safety of the aircrew and the aircraft.

(5.1.1.2.2) The person certifying a safe for flight condition has the overall responsibility to provide the aircrew with the best product available. All personnel authorized to release aircraft safe for flight shall be designated in writing by the CO and shall comply with the following requirements as a minimum:

a. Review the ADB to ensure all downing discrepancies and all flight safety QA inspections are signed off and a valid daily/turnaround inspection is completed.
b. Ensure fuel samples are taken. . . Fuel samples shall be taken within 24 hours preceding the aircraft's initial launch and shall not be valid for more than 24 hours.
c. Ensure the oil consumption has been reviewed for each engine/gearbox prior to every flight (as required).
d. Update aircraft W&B and configuration for each flight as applicable.
e. During hot seating operations, review any new discrepancies with the debarking pilot to ensure flight safety and have the debarking pilot sign block 10 of the A-Sheet verifying the aircraft is safe for flight.

CHAPTER IV

INSPECTIONS

(5.1.1.5.5) The certification of performance of turnaround inspections and daily inspections is made on a Preflight/Daily/Turnaround/Postflight Maintenance Record (OPNAV 4790/38) (Figure 4-1). The records may be destroyed upon completion of the next like inspection. All other inspections are documented on the MAF. The Preflight/Daily/Turnaround/Postflight Maintenance Record is completed by entering the following information:

Block 1 – PREFLIGHT, DAILY, TURNAROUND, and POSTFLIGHT blocks. Check the type of inspection being performed.

Block 2 – DATE AND TIME. Date and time the inspection is performed.

Block 3 – T/M/S. Aircraft T/M/S being inspected.

Block 4 – BUNO. BUNO of aircraft being inspected.

Block 5 – SIDE NO. Side number of aircraft being inspected.

Block 6 – ACTIVITY. Activity performing inspection.

Block 7 – CARD NUMBER/RTG/MOS. Pertains to maintenance checklist steps.

Block 8 – TOOL CONTAINER NUMBER. Tool container number, entered once, on the line where the using technician's name first appears.

Block 9 – DISCREPANCY / JCN. A brief narrative description of each discrepancy will be entered. A JCN is required for all discrepancies except those corrected by servicing.

Block 10 – CORRECTED. Check in YES column if discrepancy in Block 9 is corrected; check in NO column if discrepancy has not been corrected. If NO is checked, there must be a JCN in Block 9.

Block 11 – SIGNATURE AND RATE / MOS. Signature and rate or MOS of the individual performing the inspection. A signature and rate or MOS must appear for each line entry.

NOTE: For inspections requiring only one individual to perform all applicable MRC/checklist numbers, the first and last card number are required to be signed (with an arrow connecting both signatures) by the individual performing the inspection.

PREFLIGHT / DAILY / TURNAROUND / POSTFLIGHT MAINTENANCE RECORD

1. ☐ PREFLIGHT ☐ DAILY ☐ TURNAROUND ☐ POSTFLIGHT

2. DATE AND TIME STARTED _____ COMPLETED _____	3. T/M/S	4. BUNO	5. SIDE NO.	6. ACTIVITY

7. CARD NUMBER/ RTG/MOS	8. TOOL CONTAINER NUMBER	9. DISCREPANCY / JCN *	10. CORRECTED		11. SIGNATURE AND RATE / MOS **
			YES	NO	

* JCN NOT REQUIRED FOR CORRECTED SERVICING ACTIONS.
** SIGNATURES CERTIFY THAT MRCs HAVE BEEN COMPLIED WITH, VIDS/MAFS HAVE BEEN INITIATED FOR DISCREPANCIES, AND ALL TOOLS ARE ACCOUNTED FOR.

12. MAINTENANCE CONTROL REPRESENTATIVE
(Signature and rate/rank)

OPNAV 4790/38 (REV. 2/85) PREVIOUS EDITIONS MAY BE USED UNTIL SUPPLY IS EXHAUSTED S/N 0107-LF-047-9191

(FIGURE 4-1)

(5.1.1.5.6.1) **Daily Inspection**. This inspection is conducted to inspect for defects to a greater depth than the turnaround inspection. The daily inspection is valid for a period of 72 hours commencing from the date and time the inspection is completed, provided no flight occurs during this period and no maintenance other than servicing has been performed. Aircraft may be flown for 24 hours without another daily. This 24 hour period begins with the first launch following accomplishment of the daily inspection. The 24 hours cannot exceed the 72 hour expiration of the daily unless the expiration occurs during a mission. In this case the aircraft will require a daily before the next flight. Turnaround requirements are not included in the daily inspection and must be accomplished separately. Accomplishment of a turnaround does not affect the 72 hour validity of the daily inspections.

NOTES: 1. In the event maintenance, other than servicing, must be performed after the daily inspection or turnaround inspection, Maintenance Control shall determine if a complete daily or turnaround inspection or portion thereof is required.

2. COs may authorize pilots-in-command to conduct applicable T/M/S NATOPS pilot inspection, ensuring servicing requirements are accomplished, and sign the Aircraft Inspection and Acceptance Record (OPNAV 4790/141) in the certification block while operating away from home without qualified maintenance personnel for periods not exceeding 72 hours. Accomplishing these requirements, rather than completing all daily, turnaround, and fuel sampling requirements, is sufficient for safe for flight certification.

(5.1.1.5.6.2) **Turnaround Inspection**. This inspection is conducted between flights to ensure the integrity of the aircraft for flight, verify proper servicing, and to detect degradation that may have occurred during the previous flight. The turnaround inspection may be considered valid for a period of 24 hours commencing from the date and time the inspection is completed, provided that no flight and no maintenance other than servicing occurs during this period. The accomplishment of the daily inspection does not satisfy the turnaround inspection requirements.

NOTE: Accomplishment of a complete turnaround inspection is not required between repetitive flight evolutions interspersed with ground periods, such as passenger or cargo stops, hot seating, and hot refueling. . . Inspection or servicing intervals shall not be exceeded during successive evolutions.

(5.1.1.5.6.4) **Special Inspection**. This inspection is a scheduled inspection with a prescribed interval other than daily or phase. The intervals are specified in the applicable (maintenance) publication and are based on elapsed calendar time, flight hours, operating hours, or number of cycles or events, for example, 7, 28 days; 50, 100, 200 hours; 10, 100 arrestments; or 5,000 rounds fired. In some cases, aircraft special inspections contain within them engine inspection requirements. They are referred to as combined airframe and engine special inspections.

(5.1.1.5.3) Deviations. To meet unusual situations or to ease workload scheduling, reporting custodians may apply one of the following allowable deviations to inspections:

a. A plus or minus 3 days, or a portion thereof, may be applied to the authorized inspection interval of all inspections, including preservation, which are performed in increments of calendar days. The next inspection is scheduled as if no deviation had occurred. (Example: Today is Julian date 9053. There is a MAF stating the 7 day inspection is due 9052. This would not down the aircraft since this type of inspection has a +/- 3 day margin.)

b. A plus or minus 10 percent, or a portion thereof, may be applied to the authorized inspection interval of all other scheduled maintenance requirements, based on flight hours, operating hours, cycles, or events. Intervals which create fractional deviations should be rounded to the lower value, for example, 10 percent of a 125 hour inspection cycle equates to 12.5 fractional deviation and would be rounded to 12 hours. The next inspection is scheduled as if no deviation had occurred.

NOTE: When the deviations described above have expired, the aircraft is restricted from further flight operations until completion of the subject inspection, that is, after the inspection interval plus 3 days or 10 percent (as applicable) has passed, the aircraft is restricted from further flight operations. The deviations permitted above do not require logbook entries.

CHAPTER V

MAINTENANCE ACTION FORM (MAF)

No. SWP 4826 COPY 1 **5 PART FORM** ENTRIES REQUIRED SIGNATURE

WORK CENTER REGISTER, CONTROL AND PROCESSING COPY — USE BALL-POINT PEN PRESS HARD — NONE LOGS REC ☐ ☐ ☐

VIDS/MAF OPNAV 4790/60 (REV.5-88) S/N 0107-LF-002-5900

LOCAL USE

ACCUMULATED WORK HOURS: NAME/SHIFT | TOOL BOX | DATE | MAN HOURS | ELAPSED M/T

ACCUMULATED AWM HOURS: DATE | TIME REASON | HOURS

REFERENCE

(H-Z) FAILED/REQUIRED MATERIAL

79 INDEX	08 F/P	09 AWP	10 A/T	11 MAL	14 MFGR	19 PART NUMBER	34 REF SYMBOL	41 QTY	PROJ	43 PRI	45 DATE ORD	49 REQ NO	53 DATE REC
	☐	☐											
	☐	☐											
	☐	☐											
	☐	☐											
	☐	☐											
	☐	☐											
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FOLD

A02 WORK UNIT CODE | A29 ACTION | A32 TRANS | A34 MAINT | A35 ACT TAKEN | A36 MAL CODE | A38 ITEM/SF | A41 MAN HOURS | A45 ELAPSED M/T | F06 INTERIM ☐ | TECHNICAL DIRECTIVE IDENTIFICATION: F09 CODE | F11 BASIC NO | F13 RV | F16 AM | F17 PART | F19 KIT

A48 TYPE EQUIP | A52 BUREAU NUMBER | A58 DISC | A59 TIME | A60 POSIT | A62 F I D | A65 SAFETY/EJ SEAT | A69 METER | SE MFGR | A74 | INVENTORY F21 | F22 PERM UNIT CODE | F28

REPAIR CYCLE

	DATE	TIME	EOC
RECEIVED	B06	B12	B16
IN WORK	B19	B23	B27
COMPLETED	B30	B34	

AWAITING MAINTENANCE B38 | B39 HOURS | B43 | B44 HOURS | B48 | B49 HOURS

MAINTENANCE/SUPPLY RECORD

JOB STATUS	DATE	TIME	EOC
B53	B54	B58	B62
B65	B66	B70	B74
C08	C09	C13	C17
C20	C21	C25	C29
C32	C33	C37	C41
C44	C45	C49	C53
C56	C57	C61	C65
D08	D09	D13	D17

JOB CONTROL NUMBER A08 ORG | A11 DAY | A14 SER | A17 SUF | A20 WORK CENTER

REMOVED/OLD ITEM E06 MFGR | E13 SERIAL NUMBER

E23 PART NUMBER | E38 DATE REMOVED

E42 TIME/CYCLES | E47 TIME/CYCLES | E52 TIME/CYCLES

INSTALLED/NEW ITEM G06 MFGR | G13 SERIAL NUMBER

G23 PART NUMBER

G38 TIME/CYCLES | G43 TIME/CYCLES | G48 TIME/CYCLES

DISCREPANCY

PILOT/INITIATOR

CORRECTIVE ACTION

QF REQ ☐ KFI | QA REQ ☐ SIGN

CORRECTED BY | INSPECTED BY | SUPERVISOR | MAINT CONTROL

MODEX | P R I | TURN-IN DOCUMENT | SYSTEM / REASON | MCN

(15.1.1.3.2.1) MAF Initiation. Upon completion of the flight, the pilot/aircrew initiates a MAF for each discrepancy annotating the blocks listed below. For discrepancies discovered by other than pilot or aircrew, the form will be initiated by the person who discovered the discrepancy. Fill in the blocks listed below.

a. DISCREPANCY

b. PILOT/INITIATOR. The name and rank or rate of the originator of the discrepancy is printed in this block.

c. RECEIVED-DATE-TIME

d. BUNO

e. UP OR DOWN ARROW (If you are unsure, leave blank and maintenance will determine.)

f. WHEN DISCOVERED CODE. (Codes with template are in maintenance.)

(15.1.1.3.2.2) Maintenance Control reviews each MAF with the pilot or initiator to ensure the blocks . . . have been annotated. The following additional blocks are then annotated by Maintenance Control:

a. TYPE EQUIP. (**AHYC** for Bravo aircraft, **AHYD** for Charlie aircraft)

b. TYPE MAINT.

c. JCN

d. W/C

e. QA REQD (applicable only when a QAR is required).

f. C/F REQD (applicable only when a FCF is required).

(15.1.1.3.2.3) Maintenance Control completes and reviews the required entries. Copy 4 (pink copy) is placed on the right side of the ADB where it shall remain as long as the discrepancy remains outstanding, regardless of the flight to which it applies.

(15.1.1.3.2.3.1) When corrective action has been completed, Maintenance Control places Copy 3 (yellow copy) on the left side of the ADB where it shall remain for 10 subsequent flights following the completion date or beneath the Aircrew Personal Equipment Record (as appropriate). Copy 4 (pink copy) is removed from the right side of the ADB and forwarded to QA for trend analysis and other local use.

(15.1.1.3.2.3.3) Maintenance Control removes Copy 3 (yellow copy) after 10 subsequent flights. . .

(15.1.1.3.2.3.4) Flights shall be separated by the Aircraft Inspection and Acceptance Record (OPNAV 4790/141).